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NOTES:**

Project 515

November 2002

Program and Project Financial Management Needs Assessment

Background

This document presents the Program and Project Financial Management Needs Assessment for the Arizona Department of Transportation (ADOT). The report focuses on improving project budgeting, accounting, and tracking information through improved integration of systems and improved business practices. Dye Management Group, Inc. conducted the study, during which it gathered requirements for project budgeting, researched best practices, designed four financial improvement projects, and developed an implementation plan.

Approach

The best practices review was conducted to document project budgeting and accounting policies, processes, and systems used by transportation and project-oriented organizations. The research had two phases: a literature search and a survey of transportation organizations. The literature search identified features that integrated project budgeting and accounting software should include and features of commercially

available software packages that address specific needs of ADOT. The survey of transportation organizations was structured to focus on specific ADOT needs. The survey results identify business practices, system approaches, reporting capabilities, and training programs employed by other transportation organizations to be applicable to developing solutions for ADOT's needs.

Findings

The literature review resulted in key findings that address ADOT's project financial information system needs:

- Commercially available project information systems products contain features that would benefit ADOT.
- Specialized applications integrated with the project information system can supplement the capabilities of the core system; integration is key to implementing this approach.

- Business practices, policies, and procedures are important considerations in controlling project costs. The General Accounting Office cited several methods to manage project costs that are being employed by transportation organizations across the country.

The survey of transportation organizations focused on organizations with similar characteristics to ADOT including three state departments of transportation, one municipal transportation authority, and one private sector engineering firm.

Of the survey participants, two use AMS applications for project accounting, two use Oracle financial software programs, and one uses custom developed software. Additional findings were as follows:

- Both users of AMS were generally satisfied with the system and the reports.
- There was mixed satisfaction with the Oracle users.
- Montana Department of Transportation (MDT) is embarking on a project to better integrate its systems.
- ADOT's joint project agreements (JPAs) are more complex than those used by other states. The other states surveyed use either a percentage billing or a maximum amount. Their JPAs are not tied to specific elements of the project.
- The change control system and practices used by the Los Angeles Metropolitan Transit Authority demonstrated that effective management policy and direction

supported by a robust system can provide measurable improvement in the quality of reported information while reducing administrative costs.

- The transportation organizations surveyed consistently use the project budget to plan and control costs. Both construction and consultant contracts are recorded as an encumbrance or obligation against the project budget giving a clear picture of future obligations and available budget. Work orders against "roster" contracts are used to assign the work to a specific project budget.

The critical factors for successfully meeting ADOT's public and fiscal responsibilities are identified below:

- Maintaining an adequate cash flow to fund the Department's projects and operations.
- Assuring that books and records properly and accurately reflect budgeted and actual costs.
- Meeting the financial obligations of the Department.
- Developing and implementing a performance-based program plan.
- Delivering projects on time, on budget, and meeting the varying needs of constituents.
- Demonstrating the judicious use of the taxpayer's money (good stewardship).

Recommendations

A total of 78 recommendations were identified and documented from focus group meetings, executive interviews, and the responses to the ADOT internal survey. As Dye further analyzed the requirements for the financial improvements, those that have a direct impact on improving project budgeting and accounting processes and systems were identified. Financial improvement projects and phases were developed to address related groups of requirements.

During the process of identifying requirements, Dye determined that ADOT's financial system (ADVANTAGE) meets many of ADOT's financial reporting needs. Requirements identified for project budgeting, accounting, and reporting would not necessarily be fully met by implementing a replacement system. In addition, the idea of implementing a new financial and project accounting system or even upgrading the current ADVANTAGE system is viewed as cost prohibitive. As a result, Dye agreed to focus on financial improvements that can be implemented by enhancing the current system.

The financial improvement projects in this report were defined by combining related requirements into improvement projects that can be implemented incrementally. The projects represent four initiatives. They are:

1. Budget Processes and Architecture – This project addresses those requirements related to project budget processes and system improvements to support those changes.
2. Budget and Financial Reporting – This project addresses the

requirements related to improving reports and reporting systems for project budget and accounting processes.

3. Financial Policies and Procedures – This project addresses changes to financial policies and procedures to improve the overall financial controls and reporting of ADOT projects.
4. Financial Training – This project focuses on developing and conducting a training program for users and providers of ADOT project financial information.

Dye also defined other recommendations. These recommendations identify projects to address requirements that are not integral to the project budgeting and accounting improvements, but would provide significant improvements to ADOT processes. They are:

- Third Party Agreement Process – This project describes improvements to simplify the third party agreement process to reduce the effort and uncertainty in the billing process.
- Track Change Orders – This project describes a change order process that would formalize change order processing throughout the life of a project.
- Data Management – This project describes an approach for data management to further improve the organization's understanding of data and how to access it and use it.

Finally, there were six requirements that were identified as out of scope. They address ADOT's cost accounting and

document management processes, and other budget issues.

Implementation of these financial process and system improvements will provide better project financial information by updating the project budgeting and accounting processes. This effort will provide:

- Financial policies and procedures to support improved project budgeting, accounting and reporting.
- A data warehouse to integrate project financial information to meet the reporting and analysis needs of management and staff.
- Improved project budgeting procedures to provide more inclusive and realistic project budgets with improved tracking of change orders for improved accountability.
- Linkage of projects to programs to provide an assessment of how program funds are spent and the level of commitment for each program line item.
- Improved management reports.
- A training program for project budgeting, accounting, and reporting policies, procedures and processes.

Implementation Plan

The implementation plan presents proposed schedules for improving project financial processes, systems, and reports for ADOT. Dye Management Group, Inc. developed this implementation plan as a guideline for implementing the projects defined in the Financial Improvement Section. The implementation plan presents the four related projects: Budget Processes and Architecture, Budget and Financial Reporting, Financial Policies and Procedures and Financial Training.

The tasks and subtasks required to implement the project are described for each project. In addition, the work products, the responsibilities of completing tasks and delivering the work product, and the duration are provided for each project. The Implementation Schedule presents the projects to implement the ADOT Preferred Option Implementation Plan.

The four projects are presented as parallel tracks. Although the relative priority of the projects is considered in the schedule, the primary constraints to the sequence of projects are the dependencies and prerequisites between projects.

The Implementation Plan is meant to be a guide. It should be reevaluated and updated as projects progress and as more detailed information becomes available concerning priorities, resources, and schedules for each task.

<p>The full report <i>Program and Project Financial Management Needs Assessment</i> by Dye Management Group, Inc. (Arizona Department of Transportation, report number FHWA-AZ-02-515, published November 2002) is available from the Arizona Transportation Research Center, 206 S. 17 Ave., mail drop 075R, Phoenix, AZ 85007; phone 602-712-3138.</p>
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